



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/817,583

04/02/2004

Martin Weigert

16274.6a.1

2597

22913 7590 02/21/2007

WORKMAN NYDEGGER  
(F/K/A WORKMAN NYDEGGER & SEELEY)  
60 EAST SOUTH TEMPLE  
1000 EAGLE GATE TOWER  
SALT LAKE CITY, UT 84111

EXAMINER

DICKEY, THOMAS L

ART UNIT

PAPER NUMBER

2826

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/817,583

Applicant(s)

WEIGERT, MARTIN

Examiner

Thomas L. Dickey

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 10, 11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 13 is/are rejected.
- 7) ☒ Claim(s) 5-7 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
THOMAS DICKEY  
PRIMARY PATENT EXAMINER

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 and 03 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2826

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/12/2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 1-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over BARMET (2002/0139289) in view of HEO ET AL. (2004/0108809)

Barmet discloses an arrangement comprising an optoelectronic component (TFEL) 2 comprising an optical window (described in paragraph 0028 as a "transparent ITO film"

Art Unit: 2826

formed over an "active layer" of "EL pigments") for light to enter or light to leave the optoelectronic component 2; a printed circuit board 13 with electrical contacts (not supplied with part #s in the figures but described at paragraph 0031), and a flexible conductor arrangement (or "tongue," as Barmet calls it) 10 of a planar form and including a plurality of interconnects 11, where the flexible conductor arrangement 10 has contact regions connected to the electrical contacts of the printed circuit board 13 and a second portion with contact regions connected to the optoelectronic component 2 (so that interconnects 11 electrically connect the optoelectronic component 2 and corresponding electrical contacts of the printed circuit board 13), the flexible conductor arrangement 10 being bent at least in a third portion having at least one region of maximum curvature maximum with a bending radius which is equal to or greater than a minimum bending radius and lying between the first portion and the second portion, wherein the flexible conductor arrangement 10 is bent in such a way that, starting from the printed circuit board 13, the flexible conductor arrangement 10 is led around the optoelectronic component 2 and contacts the optoelectronic component 2 on a side facing away from the printed circuit board 13; the optical window being arranged on said side of the optoelectronic component 2 facing away from the printed circuit board 13 and the flexible conductor arrangement 10 defining an opening (formed in frame 5) through which light can enter and leave. Note figure 3 and paragraphs 0030-0031 of Barmet.

Art Unit: 2826

Barmet discloses, note paragraph 0028, that his optoelectronic component 2 includes electrodes required to transmit electricity through its active (light-emitting) layer portion. Although one having skill in the EL art would have recognized, from the nature of the problem to be solved (transmitting electricity through the active, light emitting portion of optoelectronic component 2) that these electrodes would require connections (i.e. terminal contacts) with interconnects 11, it cannot be stated that Barmet unequivocally discloses that the optoelectronic component includes terminal contacts connected to the contact regions of the plurality of interconnects. With regard to claim 8, Barmet plainly does not disclose a lead frame for contacting purposes, wherein the respective contact regions of the second portion of the flexible conductor arrangement are each electrically connected to a corresponding leg of the lead frame.

However, Heo et al. discloses an arrangement comprising an optoelectronic component 50 including electrodes 52-54 like those Barmet disclose within his optoelectronic component. Like Barmet, Heo et al. disclose an optoelectronic component that is an EL electroluminescent display. Unlike Barmet, Heo et al. discloses their optoelectronic component has multiple sections (pixels) capable of being independently turned on and off (addressed). Barmet's EL displays a "B" (for example) that may be lighted or not, no other options are available under Barmet. On the other hand Heo et al.'s addressable EL is capable of, for instance, displaying a "U" when

Art Unit: 2826

Barmet's elevator is going up and a "D" when Barmet's elevator is going down. In Heo et al.'s device, terminal contacts 62-64 are available for connecting internal electrodes 52-54 to a flexible printed circuit board 43 having a plurality of interconnects and arranged in a lead frame 60 for contacting purposes. Respective contact regions of flexible printed circuit board 43 may be each electrically connected to corresponding legs 62 and 64 of the lead frame 60. Note figure 5 and paragraphs 0051-0056 of Heo et al.

Therefore, it would have been obvious to a person having skill in the art to augment Barmet's arrangement with the terminal contacts connected to the contact regions of the plurality of interconnects and lead frame for contacting purposes such as taught by Heo et al. One would have been motivated to make this modification in order to, in the first instance, transmit electricity (as required by the nature of the problem posed by Barmet) to the electrodes attached to Barmet's active layer; and in the second instance, improve on the Barmet design by providing a lead frame including a large number of separate terminal contacts for independently transmitting electricity to large number of separate electrodes attached to a large number of independently addressable pixels to thus use a modified version of Barmet's arrangement for displaying different information on the same optoelectronic component at different times, as needed.

Art Unit: 2826

B. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over BARMET (2002/0139289) in view of HEO ET AL. (2004/0108809), as applied to claim 1, and further in view of DAVIS ET AL. (5,387,125).

Barmet and Heo et al. suggest an arrangement having all the limitations of claim 13 except the limitation that the flexible conductor arrange its plurality of interconnects in a flexible dielectric. Note figure 5 and paragraphs 0051-0056 of Heo et al.

However, Davis et al. discloses a flexible conductor 1 arranging its plurality of interconnects 2 in a flexible dielectric 3. Note figure 1, column 1 lines 23-30, and column 2 lines 26-34 of Davis et al. It should be noted that column 1 lines 23-30 in particular point out the advantages accruing from the use of Davis et al.'s flexible dielectric embedding a plurality of interconnects. Therefore, it would have been obvious to a person having skill in the art to arrange the plurality of interconnects of Barmet's flexible conductor in the flexible dielectric taught by Davis et al. in order to provide numerous conductor traces in a small space, to thus create a better means for making numerous parallel conductor traces connected to high density electronic circuits (such as the multi-pixel display device disclosed by Heo et al.) in an electronic device.

Art Unit: 2826

***Allowable Subject Matter***

3. Claims 14 and 15 are allowed over the references of record for the reasons set forth by Applicant in his paper of 2/3/2006.

4. Claims 5-7 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Sue A. Purvis, at 571-272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For



Art Unit: 2826

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Thomas L. Dickey**  
**Primary Examiner**  
**Art Unit 2826**